

# Brocade 7800 Extension Switch and FX8-24 Extension Blade Hardware Release Notes

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For Installation in a Sun™ Storage Area Network

Sun Microsystems, Inc.  
[www.sun.com](http://www.sun.com)

Part No. 821-0797-10  
November 2009, Revision A

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# Brocade 7800 Extension Switch and FX8-24 Extension Blade Hardware Release Notes

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Read this document to be aware of issues or requirements that can affect the installation and operation of the Brocade 7800 Extension Switch and FX8-24 Extension Blade in a Sun storage area network (SAN).

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This document contains the following sections:

- [“Product Features” on page 2](#)
- [“Supported Firmware” on page 4](#)
- [“Supported Hardware” on page 5](#)
- [“Supported Management Interfaces and Protocols” on page 10](#)
- [“Downloading and Installing Patches” on page 11](#)
- [“Related Documentation” on page 12](#)
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# Product Features

The Brocade 7800 Extension Switch and FX8-24 Extension Blade combine Fibre Channel (FC) switching and routing capabilities with hardware-assisted Fibre Channel over Internet Protocol (FCIP), allowing the extension of FC fabrics over longer distances than those allowed by standard FC links.

Both products share the following configuration features:

- **FCIP Trunking** — multiple source/destination address pairs are combined over multiple Ethernet interfaces to achieve higher bandwidth and failover resiliency.
- **Adaptive Rate Limiting** — guarantees minimum bandwidth for FCIP tunnels.

Additional features are detailed by product:

- [“Brocade 7800 Extension Switch” on page 2](#)
- [“Brocade FX8-24 Extension Blade” on page 3](#)

## Brocade 7800 Extension Switch

The Brocade 7800 Extension Switch is a self-contained, one rack unit (1U) switch with the following features:

- 16 FC ports, auto sensing to 1, 2, 4, or 8 Gbit/sec (depending on the small form-factor pluggables (SFPs) installed).
- Six 1-Gigabit Ethernet ports (for FCIP links), split as follows:
  - Two ports configurable for copper (via built-in RJ45) or optical (via SFPs).
  - Four ports with support for SFPs only, optical or copper.
- Two redundant, hot-swappable combined power supply/fan modules.

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**Note** – Four FC ports and two 1-Gigabit Ethernet ports are enabled by default. The remaining ports can be enabled with the purchase of an Upgrade Bundle license, allowing activation of all 16 FC ports and all six 1-Gigabit Ethernet ports.

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## Brocade FX8-24 Extension Blade

The Brocade FX8-24 Extension Blade shares similar capability with the Brocade 7800 Extension Switch but also includes support for 10-Gigabit Ethernet FCIP connections. It is designed to be installed in a Brocade DCX Backbone or DCX-4S Backbone.

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**Note** – Specific chassis compatibility information can be found in the Brocade Fabric OS release notes delivered with the SunSolve<sup>SM</sup> patch. Be sure to review this information before starting hardware installation. For more information, see [“Supported Firmware” on page 4](#).

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The Brocade FX8-24 Extension Blade has the following features:

- Twelve FC ports, auto sensing to 1, 2, 4, or 8 Gbit/sec (depending on the SFPs installed).
- Ten 1-Gigabit Ethernet and two 10-Gigabit Ethernet ports (for FCIP links), configurable in the following operation modes:
  - (10) 1-Gigabit Ethernet ports
  - (10) 1-Gigabit Ethernet ports and (1) 10-Gigabit Ethernet port
  - (2) 10-Gigabit Ethernet ports

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**Note** – Both 10-Gigabit Ethernet ports are disabled by default and can be activated with purchase of an Upgrade Bundle license.

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# Supported Firmware

The minimum supported firmware must be installed on your equipment for full support from Sun and for optimization of SAN benefits.

- **Brocade 7800 Extension Switch** — Brocade Fabric OS 6.3.0a (minimum) must be installed on the switch.
- **Brocade FX8-24 Extension Blade** — Brocade Fabric OS 6.3.0a (minimum) must be installed on the Brocade DCX Backbone or DCX-4S Backbone in which the blade is installed.

Brocade Fabric OS 6.3.0a is available as patch ID 142801-01. For more information, see [“Downloading and Installing Patches” on page 11](#).

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**Note** – A list of features, limitations, and other details for each Brocade Fabric OS release can be found in the Brocade Fabric OS release notes delivered with the SunSolve patch. Be sure to review this information before starting hardware installation.

The Brocade Fabric OS release notes are also available from MyBrocade:

<https://login.brocade.com>

A login is required, but registration is free with a valid World Wide Name, MAC address, or License Activation Key (as appropriate).

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# Supported Hardware

**Note** – The following is intended to provide a point-in-time list of what Sun price-listed hardware is supported by the Brocade 7800 Extension Switch and FX8-24 Extension Blade at time of release only. The list is not intended to show complete interoperability or supportability information and will not be updated as new hardware is released. If you have Sun hardware that is not explicitly listed, see the Sun release notes for that product or contact Sun Services to determine support.

- [“Switches” on page 5](#)
- [“Storage Platforms” on page 6](#)
- [“Host Bus Adapters” on page 8](#)

## Switches

[TABLE 1](#) lists the switches, directors, and backbones compatible with the following configurations:

- A Brocade 7800 Extension Switch running Fabric OS 6.3.0a.
- A Brocade DCX Backbone or DCX-4S Backbone running Fabric OS 6.3.0a with a Brocade FX8-24 Extension Blade installed.

Use the recommended software release versions to optimize the benefits of a SAN.

**TABLE 1** Supported Switches and Brocade Fabric OS Compatibility

Supported Switch, Director, or Backbone	General Compatibility	Recommended
Brocade 200E Fibre Channel Switch	5.1.0	6.2.1b
Brocade 300 Switch	6.1.0e	6.3.0a
Brocade 4100 Enterprise Fabric Switch	6.1.0e	6.3.0a
Brocade 4900 Switch	6.1.0e	6.3.0a
Brocade 5000 Switch	6.1.0e	6.3.0a
Brocade 5100 Switch	6.1.0e	6.3.0a
Brocade 5300 Switch	6.1.0e	6.3.0a
Brocade 7500 SAN Extension Switch	6.1.0e	6.3.0a
Brocade 7500E SAN Extension Switch	6.1.0e	6.3.0a

**TABLE 1** Supported Switches and Brocade Fabric OS Compatibility (*Continued*)

Supported Switch, Director, or Backbone	General Compatibility	Recommended
Brocade 7800 Extension Switch	6.3.0a	6.3.0a
Brocade 8000 Switch	6.3.0a	6.3.0a
Brocade 48000 Director	6.1.0e	6.3.0a
Brocade DCX Backbone	6.0.0	6.3.0a
Brocade DCX-4S Backbone	6.2.0a	6.3.0a
Brocade SilkWorm 3250 Fabric Switch	5.3.2	5.3.2c
Brocade SilkWorm 3850 Fabric Switch	5.3.2	5.3.2c
Brocade SilkWorm 3900 Switch	5.3.2	5.3.2c
Brocade SilkWorm 12000 Fabric Switch	5.0.x	5.0.5c
Brocade SilkWorm 24000 Director	5.3.2	5.3.2c
M6140, ED-6064, ES-4300, ES-4500, ES-4700	E/OSc 9.9.6	E/OSc 9.9.6
Mi10K	E/OSn 9.9.6	E/OSn 9.9.6

## Storage Platforms

The following storage platforms are supported by the Brocade 7800 Extension Switch and FX8-24 Extension Blade.

- [“Modular Disk” on page 6](#)
- [“Workgroup Disk” on page 7](#)
- [“Datacenter Disk” on page 7](#)
- [“Tape Drives” on page 7](#)
- [“Tape Libraries” on page 7](#)
- [“Tape Virtualization” on page 7](#)

### *Modular Disk*

- Sun Storage 6580 and 6780 arrays
- Sun StorageTek™ 6140 and 6540 arrays
- Sun StorageTek Flex 240, 280, and 380
- Sun StorEdge™ 6130 Array

### *Workgroup Disk*

- Sun StorageTek 2540 array
- Sun StorEdge 3510 and 3511 FC arrays

### *Datacenter Disk*

- Sun StorageTek 9970, 9980, 9985V, and 9990V systems
- Sun StorEdge 9985 and 9990 systems

### *Tape Drives*

- Sun StorageTek T9840B, T9840C and T9840D tape drives
- Sun StorageTek T9940B tape drives
- Sun StorageTek T1000A and T1000B
- IBM and HP LTO-3 and LTO-4 tape drives

### *Tape Libraries*

- Sun StorageTek L700 and L1400 tape libraries
- Sun StorageTek SL500, SL3000, and SL8500 modular library systems

### *Tape Virtualization*

- Sun StorageTek Virtual Tape Library (VTL Enterprise) System
- Sun StorageTek Virtual Tape Library Plus (VTL Plus) System
- Sun StorageTek Virtual Tape Library Prime (VTL Prime) System

# Host Bus Adapters

The following Host Bus Adapters (HBAs) are supported by the Brocade 7800 Extension Switch and FX8-24 Extension Blade and are listed by operating system.

- [“Solaris™ 9 \(SPARC\)” on page 8](#)
- [“Solaris 10 \(SPARC, x86, x64\)” on page 8](#)
- [“Red Hat/SuSE Linux” on page 8](#)
- [“Windows Server 2003 and 2008” on page 9](#)

## *Solaris™ 9 (SPARC)*

- SG-XPCI1FC-QF4 / SG-XPCI2FC-QF4
- SG-XPCI2FC-EM4-Z / SG-XPCI1FC-EM4-Z

## *Solaris 10 (SPARC, x86, x64)*

- SG-XPCIE1FC-QF4 / SG-XPCIE2FC-QF4
- SG-XPCIE1FC-EM4 / SG-XPCIE2FC-EM4
- SG-XPCI1FC-QF4 / SG-XPCI2FC-QF4
- SG-XPCI1FC-EM4 / SG-XPCI2FC-EM4
- SG-XPCIE2FCGB-QZ
- SG-XPCIE2FCGBE-E-Z
- SG-XPCIE1FC-QF8-Z / SG-XPCIE2FC-QF8-Z
- SG-XPCIE1FC-EM8-Z / SG-XPCIE2FC-EM8-Z

## *Red Hat/SuSE Linux*

- SG-XPCIE1FC-QF4 / SG-XPCIE2FC-QF4
- SG-XPCIE1FC-EM4 / SG-XPCIE2FC-EM4
- SG-XPCI1FC-QF4 / SG-XPCI2FC-QF4
- SG-XPCI1FC-EM4 / SG-XPCI2FC-EM4
- SG-XPCIE2FCGB-QZ
- SG-XPCIE2FCGBE-E-Z
- SG-XPCIE1FC-QF8-Z / SG-XPCIE2FC-QF8-Z
- SG-XPCIE1FC-EM8-Z / SG-XPCIE2FC-EM8-Z

### *Windows Server 2003 and 2008*

- SG-XPCIE1FC-QF4 / SG-XPCIE2FC-QF4
- SG-XPCIE1FC-EM4 / SG-XPCIE2FC-EM4
- SG-XPCI1FC-QF4 / SG-XPCI2FC-QF4
- SG-XPCI1FC-EM4 / SG-XPCI2FC-EM4
- SG-XPCIE2FCGB-QZ
- SG-XPCIE2FCGBE-E-Z
- SG-XPCIE1FC-QF8-Z / SG-XPCIE2FC-QF8-Z
- SG-XPCIE1FC-EM8-Z / SG-XPCIE2FC-EM8-Z

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# Supported Management Interfaces and Protocols

The Brocade 7800 Extension Switch and FX8-24 Extension Blade support the following management interfaces and protocols.

- [“Management Interfaces” on page 10](#)
- [“Protocols” on page 10](#)

## Management Interfaces

- Brocade Fabric Access application programming interface (API)
- Brocade Fabric OS command-line interface (CLI)
- Brocade Web Tools
- Data Center Fabric Manager (DCFM) 10.3.x
- Simple Network Management Protocol (SNMP) v1 and v3
- Hypertext Transfer Protocol (HTTP) and Hypertext Transfer Protocol Secure (HTTPS)
- Secure Shell (SSH) Protocol v2
- Telnet

## Protocols

- Fibre Channel (FC)
- Fibre Channel over IP (FCIP)
- Fibre Channel Security Protocol (FC-SP)
- HTTP and HTTPS
- Remote Authentication Dial In User Service (RADIUS)
- Secure File Transfer Protocol (SFTP)
- SSH Protocol v2
- SNMP v1 and v3
- Telnet
- Terminal Access Controller Access-Control System Plus (TACACS+)

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# Downloading and Installing Patches

The following task provides instructions for downloading and installing patches for Sun-supported switch hardware. See “Supported Firmware” on page 4 for supported firmware information for the Brocade 7800 Extension Switch and FX8-24 Extension Blade.

**1. Access the SunSolve web site at:**

<http://sunsolve.sun.com>

**2. Within the Support Services category, select Patches and Updates.**

**3. Select PatchFinder, then type the patch ID and click Search.**

Do not type the -xx revision number. PatchFinder automatically finds the latest patch.

**4. From the list of available patches, select the desired patch ID.**

Detailed patch ID information will be displayed.

**5. Verify you have retrieved the correct patch, then print the page.**

Printing this page also prints the patch README file, which contains installation instructions, special instructions, special guidelines, and notes.

**6. Download the patch by clicking on either HTTP or FTP as shown in the following line:**

Download Patch (*nn,nnn,nnn* bytes): HTTP FTP.

**7. Repeat this process for each patch you wish to download.**

**8. Install the patches.**

Follow the installation instructions in each patch README file.

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## Related Documentation

Brocade documentation is available at MyBrocade:

<https://login.brocade.com>

A login is required, but registration is free with a valid World Wide Name, MAC address, or License Activation Key (as appropriate).

- [“Documentation for the Brocade 7800 Extension Switch” on page 12](#)
- [“Documentation for the Brocade FX8-24 Extension Blade” on page 13](#)

## Documentation for the Brocade 7800 Extension Switch

- *Brocade 7800 Extension Switch Hardware Installation Manual*  
(Brocade P/N 53-1001350-01)
- *Fixed Rack Mount Kit Installation Procedure*  
(Brocade P/N 53-1001274-01)
- *Mid-Mount Rack Kit (Switch) Installation Procedure*  
(Brocade P/N 53-1001273-02)
- *Slide Rack Mount Kit Installation Procedure*  
(Brocade P/N 53-1001434-01)
- *Brocade Fabric OS Administrator’s Guide supporting Fabric OS 6.3.0*  
(Brocade P/N 53-1001336-01)
- *Brocade Fabric OS Command Reference Manual supporting Fabric OS 6.3.0*  
(Brocade P/N 53-100337-01)
- *EZSwitch Setup Administrator’s Guide*  
(Brocade P/N 53-1001344-01)
- *WebTools Administrator’s Guide*  
(Brocade P/N 53-1001343-01)
- *Fabric Watch Administrator’s Guide*  
(Brocade P/N 53-1001342-01)
- *Fabric OS FCIP Administrator’s Guide Supporting Fabric OS 6.3.0*  
(Brocade P/N 53-1001349-01)
- *Fabric OS Troubleshooting & Diagnostics Guide for FOS 6.3*  
(Brocade P/N 53-1001340-01)
- *Fabric Message Reference, supporting FOS 6.3*  
(Brocade P/N 53-1001338-01)
- Brocade Fabric OS release notes available with the SunSolve patch or from MyBrocade. See [“Supported Firmware” on page 4](#) for more information.

## Documentation for the Brocade FX8-24 Extension Blade

- *Brocade DCX Backbone Hardware Reference Manual*  
(Brocade P/N 53-1000685-10)
- *Brocade DCX-4S Backbone Hardware Reference Manual*  
(Brocade P/N 53-1001191-05)
- *Brocade Fabric OS Administrator's Guide supporting Fabric OS 6.3.0*  
(Brocade P/N 53-1001336-01)
- *Brocade Fabric OS Command Reference Manual supporting Fabric OS 6.3.0*  
(Brocade 53-100337-01)
- *Fabric OS FCIP Administrator's Guide Supporting Fabric OS 6.3.0*  
(Brocade P/N 53-1001349-01)
- *EZSwitch Setup Administrator's Guide*  
(Brocade P/N 53-1001344-01)
- *WebTools Administrator's Guide*  
(Brocade P/N 53-1001343-01)
- *Fabric Watch Administrator's Guide*  
(Brocade P/N 53-1001342-01)
- *Fabric OS Troubleshooting & Diagnostics Guide for FOS 6.3*  
(Brocade P/N 53-1001340-01)
- *Fabric Message Reference, supporting FOS 6.3*  
(Brocade P/N 53-1001338-01)
- Brocade Fabric OS release notes available with the SunSolve patch or from MyBrocade. See ["Supported Firmware" on page 4](#) for more information.

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## Service Contact Information

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<http://www.sun.com/service/contacting/index.xml>

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